

such as information acquired during skill learning, habit formation, classical conditioning, emotional learning, and priming. Also known as nondeclarative memory. {im'plis-ət 'mem-rē}

**implicit programming** [CONT SYS] Robotic programming that uses descriptions of the tasks at hand which are less exact than in explicit programming. {im'plis-ət 'prō-gram-ing}

**implosion** [CHRM] The sudden reduction of pressure by chemical reaction or change of state which causes an intruding of the surrounding medium. [PHYS] A bursting inward, as in the inward collapse of an evacuated container (such as the glass envelope of a cathode-ray tube) or the compression of fissionable material by ordinary explosives in a nuclear weapon. {im'plō-zhən}

**implosion weapon** [ORD] A nuclear weapon in which a quantity of fissionable material, less than a critical mass in its untriggered configuration, has its volume suddenly reduced by compression with ordinary explosives, so that it becomes supercritical and a nuclear explosion can occur. {im'plō-zhən 'wep-ən}

**imposed date** [IND ENG] An assignment of a date to an activity that represents either the earliest or the latest date at which the activity can be either started or finished. {im'pōzd 'dæt}

**imposed load** [CIV ENG] Any load which a structure must sustain, other than the weight of the structure itself. {im'pōzd 'lōd}

**imposition** [GRAPHICS] The pattern of arranging pages for a signature of a book so that the pages will be in sequence when folding occurs. {im'pō-zish-ən}

**impost** [ARCH] The highest part of a column, pillar, pier, or wall upon which the end of an arch rests. {im'pōst 'arch}

**impotence** [MED] 1. Inability in the male to perform the sexual act. 2. Lack of sexual vigor. {im'pōd-əns}

**impound** [CIV ENG] To collect water for irrigation, flood control, or similar purpose. {im'paund}

**impounding reservoir** [CIV ENG] A reservoir with outlets controlled by gates that release stored surface water as needed in a dry season; may also store water for domestic or industrial use or for flood control. Also known as storage reservoir. {im'paund-ən 'rez-ə-vw-ər}

**impregnate** [ENG] To force a liquid substance into the spaces of a porous solid in order to change its properties, as the impregnation of turquoise gems with plastic to improve color and durability, the impregnation of porous tungsten with a molten barium compound to manufacture a dispenser cathode, or the impregnation of wood with creosote to preserve its integrity against water damage. [MED] To fertilize or cause to become pregnant. {im'preg-nāt}

**impregnated bit** [DES ENG] A sintered, powder-metal matrix bit with fragmented bort or whole diamonds of selected screen sizes uniformly distributed throughout the entire crown section. {im'preg-nād-əd 'bit}

**impregnated timber** [MATER] Timber which has been made flame-resistant, fungi-resistant, or insect-proof by forcing into it under vacuum or pressure a flame retardant or a fungal or insect poison. {im'preg-nād-əd 'tim-bər}

**impressed current** [ELEC] Direct current supplied by an external power source in a cathodic protection installation. {im'prest 'kər-ənt}

**impressed voltage** [ELEC] Voltage applied to a circuit or device. {im'prest 'vōl-tij}

**impression** [GEOL] A form left on a soft soil surface by plant parts; the soil hardens and usually the imprint is a concave feature. [GRAPHICS] 1. A print made from an engraved plate. 2. A press run or printing of a book. [MET] A machined cavity in a forging die for production of a specific geometric shape in the workpiece. {im'presh-ən}

**impression block** [PETRO ENG] A block with wax or lead on the bottom run into a well and allowed to rest on a lost tool or other object so that an examination of the resultant impression is revelatory concerning the size, shape, or position of the object. {im'presh-ən 'blōk}

**impression cylinder** [GRAPHICS] A cylinder onto which an inked image is pressed, so that this image can be transferred to paper in the offset duplicating process. {im'presh-ən 'sil-ə-dər}

**imprint** See overprint. {im'print}

**imprinter** [GRAPHICS] Any device for entering markings

onto a form, including, but not limited to, printing presses, typewriters, pressure imprinting devices such as those used with credit cards and address plates, pencils, pens, cash registers, adding machines, and bookkeeping machines. {im'print-ər}

**imprinting** [PSYCH] The very rapid development of a response or learning pattern to a stimulus at an early and usually critical period of development; particularly characteristic of some species of birds. {im'print-ing}

**imprisoned incompleteness** [RELAT] The property of incomplete geodesics in a space-time being confined to a compact neighborhood. {im'priz-ənd 'in-kəm'plet-nəs}

**improper divisor** [MATH] An improper divisor of an element  $x$  in a commutative ring with identity is any unit of the ring or any associate of  $x$ . {im'prəp-ər di'vī-zər}

**improper face** [MATH] For a convex polytope, either the empty set or the polytope itself. {im'prəp-ər 'fās}

**improper fraction** [MATH] 1. In arithmetic, the quotient of two integers in which the numerator is greater than or equal to the denominator. 2. In algebra, the quotient of two polynomials in which the degree of the numerator is greater than or equal to that of the denominator. {im'prəp-ər 'frak-shən}

**improper integral** [MATH] Any integral in which either the integrand becomes unbounded on the domain of integration, or the domain of integration is itself unbounded. {im'prəp-ər 'int-ə-grəl}

**improperly posed problem** See ill-posed problem. {im'prəp-ər-lē 'pōzd 'prōbləm}

**improper orthogonal transformation** [MATH] An orthogonal transformation such that the determinant of its matrix is  $-1$ . {im'prəp-ər ōr'θəg-ə-nəl 'tranz-fər'mā-shən}

**improvement factor** See noise improvement factor. {im'prūv-mənt 'fak-tər}

**improvement threshold** [COMMUN] The condition of unity for the ratio of peak carrier voltage to peak noise voltage after selection and before any nonlinear process such as amplitude limiting. {im'prūv-mənt 'thresh-əld}

**improvised grenade** [ORD] Any nonstandard type of grenade which is prepared by the user, for example, frangible grenades and fragmentation grenades composed of nails, cartridge cases, or other fragments taped to the sides of a trinitrotoluene block, with suitable detonating device. {im'prə'vīzd grə'nād}

**improvised mine** [ORD] A mine manufactured of available materials because standard mines are either unavailable or are incapable of producing the desired result. {im'prə'vīzd mīn}

**impsonite** [GEOL] A black, asphaltic pyrobitumen with a high fixed-carbon content derived from the metamorphosis of petroleum. {im'sə,nī}

**impulse** [MECH] The integral of a force over an interval of time. [MET] A single pulse or several pulses in welding current used in resistance welding. [PHYS] A pulse which lasts for so short a time that its duration can be thought of as infinitesimal. [PSYCH] A sudden psychogenic urge to act. {im'pōls}

**impulse approximation** [PHYS] An approximation for studying the collision of an incident particle with a bound target particle, in which the binding forces on the target particle during the collision are ignored. {im'pōls ə'prāk-sə'mā-shən}

**impulse excitation** See shock excitation. {im'pōls 'ek-sə'tā-shən}

**impulse face** [HOROL] Lifting surface of a club tooth on an escape wheel, or the surface of a pallet stone engaged by such a wheel. {im'pōls 'fās}

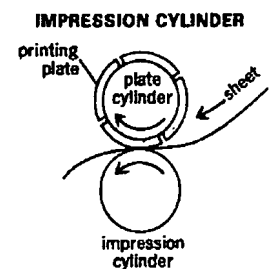
**impulse function** [MATH] An idealized or generalized function defined not by its values but by its behavior under integration, such as the (Dirac) delta function. {im'pōls 'fəŋk-shən}

**impulse generator** [ELEC] An apparatus which produces very short surges of high-voltage or high-current power by discharging capacitors in parallel or in series. Also known as pulse generator. {im'pōls jen-ə-rād-ər}

**impulse modulation** [CONT SYS] Modulation of a signal in which it is replaced by a series of impulses, equally spaced in time, whose strengths (integrals over time) are proportional to the amplitude of the signal at the time of the impulse. {im'pōls mōd-ə-lā-shən}

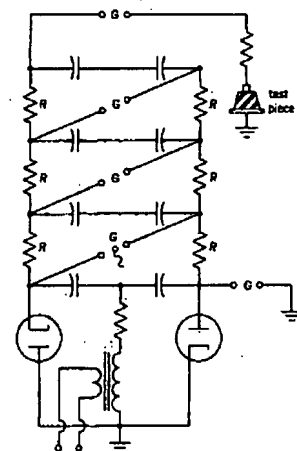
**impulse movement** [HOROL] Clock movement in which the

COPY



The plate and impression cylinders in a rotary press.

# IMPULSE GENERATOR



Typical four-stage Marx impulse generator circuit.  $R$  = resistor,  $G$  = spark gap.